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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,306	10/17/2003	Yan Borodovsky	10559/879001/P17481	8888
20985	7590	05/05/2006	EXAMINER	
FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			FULLER, RODNEY EVAN	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/688,306	BORODOVSKY, YAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rodney E. Fuller	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 10-15 and 33-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-15 and 33-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Rodney Fuller  
Primary Examiner



#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/25/05; 2/16/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on February 16, 2006 has been entered.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on February 16, 2006 has been considered by the examiner. However, references AC (Fritze, et al. US 6,818,389) and AC (Fritze, et al. US 6,844,551) had been previously cited by the examiner in the Office Action dated November 15, 2005. (PTO-892 – 11/15/2005)

3. The information disclosure statement (IDS) previously submitted on October 25, 2005 was considered and returned to the applicant in the Office Action dated November 15, 2005. References AK (0-915-384) and AN (WO05/036273) were not initialed by the examiner. The references cited on the IDS have been reconsidered and initialed to indicate that they have been considered.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 10-15 and 33-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin (US 2004/0110092).

Regarding claim 10, Lin discloses “a substantially arbitrary arrangement (abstract, line 1) of contacts (abstract, line 2), the contacts having a definition characteristic of interference lithography (abstract, lines 2-3), wherein the contacts have been defined by exposing a resist using interference lithography (abstract, line 2-3) and etching the contacts using the resist as a guide (abstract, line 14; paragraph 0004, lines 16-18).”

Regarding claim 11, Lin discloses “wherein the substantially arbitrary arrangement of contacts comprises contacts printed with a pitch approaching one half the wavelength of a patterning electromagnetic radiation.” (paragraph 0025, lines 17-21)

Regarding claim 12, Lin discloses “wherein the substantially arbitrary arrangement of contacts comprises contacts free from defects arising due to one or more of lens imperfections and mask imperfections.” (paragraph 0010, lines 1-6)

Regarding claim 13, Lin discloses "wherein the substantially arbitrary arrangement of contacts comprises contacts free from defects arising due to backscatter of electrons." (paragraph 0010, lines 1-6)

Regarding claim 14, Lin discloses "wherein the substantially arbitrary arrangement of contacts comprises a portion of a microelectronic device." (paragraph 0004, lines 1-3)

Regarding claim 15, Lin discloses "wherein the portion of the microelectronic Device comprises a portion of an SRAM memory device." (paragraph 0004, lines 1-3)

Regarding claim 33, Lin discloses "wherein the contacts have been formed by exposing a resist to two substantially orthogonal interference patterns (Fig. 1, ref.# 52, 54; paragraph 0022, lines 13-17; paragraph 0026, line 14) and etching the contacts using the resist as a guide (abstract, line 14; paragraph 0004, lines 16-18).

Regarding claim 34, Lin discloses "wherein the contacts have been formed by exposing the resist to two substantially orthogonal interference patterns (Fig. 1, ref.# 52, 54; paragraph 0022, lines 13-17; paragraph 0026, line 14) formed using laser beams (paragraph 0021, line 10)."

Regarding claim 35, Lin discloses "wherein the contacts have a same pitch in the directions of the substantially orthogonal interference patterns." (paragraph 0025, lines 17-21)

Regarding claim 36, Lin discloses "wherein the contacts have been formed by exposing a resist to an interference pattern of electromagnetic radiation (paragraph 0022, lines 12-14), rotating the resist relative to the interference pattern (paragraph

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0022, lines 17-22)), exposing the rotated resist to the interference pattern (paragraph 0022, lines 14-16), and etching the contacts using the resist as a guide (abstract, line 14; paragraph 0004, lines 16-18)."

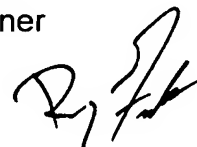
***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E. Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller  
Primary Examiner  
Art Unit 2851



April 28, 2006